

THE LECONTE THRASHER, *HARPORHYNCHUS*
LECONTEI.

BY DR. C. HART MERRIAM.

Plate I.

THE great Colorado River, emerging from the marvellous cañons of northern Arizona, bends southward to traverse a vast, inhospitable desert, parts of which, below the level of the sea, surpass the deserts of India, Arabia, and even the great Sahara in heat, aridity and desolation. The burning sun, set in a cloudless sky, beats down relentlessly on a dreary expanse of sand, gravel and clay, broken only by the seared walls of barren desert ranges. The picture is made more weird and the way fraught with greater danger by the mirage-breeding alkali beds that warn the experienced traveller of impending danger; but hundreds of venturesome explorers, pushing on until crazed with thirst, have been overtaken by despair and death.

These deserts receive little water: the rainfall is meagre, the streams from the surrounding mountains soon disappear in the hot sands, and the broad Colorado itself hurries on to the sea as if in a conduit, without imparting verdure to even its immediate banks save in a few favored spots. The vegetation is scanty and peculiar: the sandy gravel slopes are covered with the resinous *Larrea* or creosote bush, more or less mixed with cactuses, yuccas, daleas, ephedras and other desert forms, while the alkaline and saline clay soils are dotted here and there with greasewoods and fleshy saline plants.

Such is the home of the LeConte Thrasher. The environment is uncongenial to most diurnal forms of animal life, and the usually dominant element of competition is nearly absent in the struggle for existence—the struggle being one against hostile conditions, not against a multitude of competitors. Diurnal mammals are rare and restricted to a few species; birds are scarce, both as species and individuals, but reptiles are more plentiful, particularly lizards and rattlesnakes.

The area covered by these deserts is so large that different parts have received different names, as the Colorado, Mohave,





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LECONTE'S THRASHER (HARPORHYNCHUS LECONTEI)

Panamint, Death Valley, and Amargosa Deserts in California; the Detrital, Gila, and Yuma Deserts in Arizona; the Pahrump and Vegas Deserts in Nevada, and the Valley of the Virgin which reaches northward across southeastern Nevada and northwestern Arizona to the extreme southwestern corner of Utah.

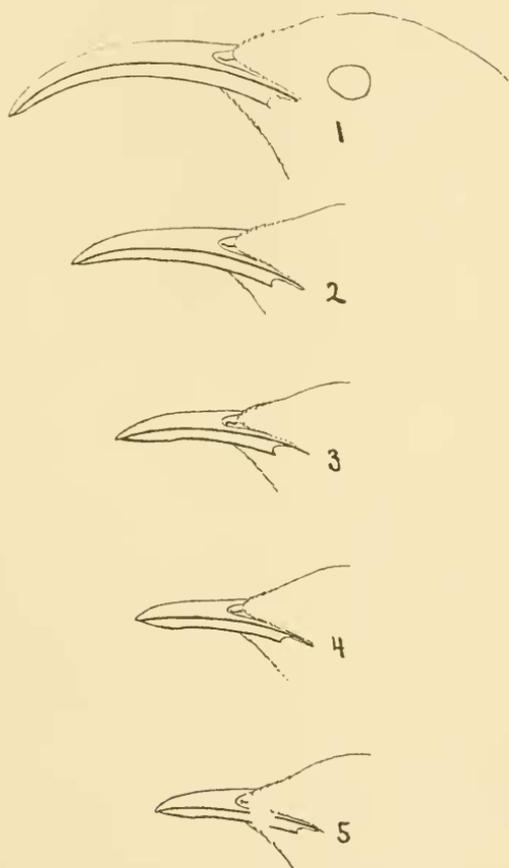
Of the birds that breed in the desert no species is abundant, though the Black-throated Sparrow (*Amphispiza bilineata*) is tolerably common and the Cactus Wren and Costa Hummingbird are frequently observed. A few others are met from time to time. The presence of two of these is most often revealed by their footprints on the sand. They are the Road-runner (*Geococcyx californianus*) and the LeConte Thrasher (*Harpophynchus lecontei*). The latter is by far the more abundant of the two and its pleasant song is often heard in the distance, though the bird is seldom seen.

During the Death Valley Expedition it was my good fortune to ride on horseback with my assistant, Mr. Vernon Bailey, a distance of about 1500 miles within the restricted area inhabited by the LeConte Thrasher, and to follow the northern boundary of its range from California across Nevada to Utah and Arizona. During this journey, covering the months of April, May and June. I first saw the bird on the Mohave Desert between Daggett and Pilot Knob, April 4; nearly every day afterward it or its footprints were seen, or its song heard. It was usually a shy bird, keeping at a distance, and eluding pursuit by running rapidly over the ground and hiding among the cactuses or desert brush. When running it commonly carried its tail elevated at an angle of about 45°, as mentioned by Mr. Stephens. If a Thrasher was seen singing on a mesquite or creosote bush and an attempt was made to approach within gunshot, it would immediately drop to the ground and escape by running; and the chances were very much against seeing it again. This extreme wariness is hard to understand in view of the remoteness of the region from the haunts of man, for it is safe to say that throughout the area traversed no bird of this species was ever looked at over the barrel of a gun before the visit of the Death Valley Expedition. At the same time it is true that at certain points along the outskirts of its range (as in Owens Valley, California) the young are

sought as cage birds by both Indians and whites. Probably two broods are reared in a season — judging from the widely different dates at which evidences of breeding were found. On April 29, I shot a two-thirds grown young in Pahrump Valley, Nevada, after a long and tiresome chase — partly on horseback and partly on foot. It was among the creosote bushes (*Larrea*) at the lower edge of the yuccas on the east side of the valley. The parent and two young were seen. On May 1, I killed a full grown young in Vegas Valley, Nevada. A week later (May 7), Mr. Bailey found a fresh nest in an arborescent cactus (*Opuntia echinocarpa*) at the foot of the high mesa on the east side of Muddy Creek, near St. Joe, Nevada. The parent bird was seen to leave the nest, but the eggs had not yet been laid. I hid behind a creosote bush and waited until the bird returned, which she did by running silently over the ground and climbing up to the nest so cautiously that, though watching the nest all the time, I did not see her until she settled upon it. The next day, May 8, Mr. F. Stephens, another member of the expedition, found a nest containing 3 nearly fresh eggs between Owens Lake and Little Lake, Inyo Co., California. The nest was in a branching cactus about 2½ feet from the ground. He saw a brood of nearly grown young the same day, and also observed both nests and young in Salt Wells Valley, on the northern edge of the Mohave Desert. On May 28, Mr. Bailey found a deserted nest in an arborescent cactus in Indian Spring Valley, Nevada. A month later (June 27), I discovered a nest containing two half-grown young in Antelope Valley at the west end of the Mohave Desert, California. Like the others, it was in a branching cactus less than a meter above the ground. One of the two young was a little larger than the other. The smaller of the two is figured in the accompanying colored plate.¹ It is thus evident that the breeding season covers at least three months — Mr. Stephens makes it even longer. Whether this indicates that more than one brood is reared, or that the date of nesting is subject to much irregularity, or both, the facts at hand are not sufficient to

¹The adult shown on the same plate was killed by Dr. A. K. Fisher at Resting Spring on the edge of the Amargosa Desert, Feb. 7, 1891.

determine. But as a rule resident birds are less regular than migrants in the time of breeding, and in warm climates where the season is long the irregularity is likely to be greater than in cool climates where the season is short.



CHANGES IN THE FORM OF THE BILL WITH AGE IN *Harporhynchus lecontei*.

The nest is a compact and rather bulky structure composed mainly of small twigs and not covered above. Though sometimes in a mesquite or other thorny bush, it is placed by prefer-

ence among the spiny branches of the common 'cholla,' a small arborescent cactus (*Opuntia echinocarpa*), at a height rarely more than a meter above the ground. The covered woven nest of the Cactus Wren (*Helodytes brunneicapillus*) is often found in the same cactus.

It is interesting from the evolutionary standpoint that the strongly curved bill of the LeConte Thrasher is a peculiarity of the adult; the young in the nest show no trace of it. This is well illustrated in the accompanying bill outlines, all of which are natural size. Figs. 4 and 5 are from the two young taken from the nest in the Mohave Desert June 27. Fig. 3, showing the earliest trace of the curvature, is from the two-thirds grown young killed in Pahrump Valley, Nevada, April 29. Fig. 2, showing the next step in the development of the curve, is from the young killed in Vegas Valley, Nevada, May 1; and Fig. 1 is the bill of an adult killed by Dr. A. K. Fisher at Resting Spring, California, February 7.

As stated by Dr. Fisher, the LeConte Thrasher is probably resident wherever found, since it was obtained in winter at the northern limit of its breeding range and old nests were seen at or near most places where the birds themselves were noted. Furthermore, the absence of records from Mexico, except within its breeding range in northwestern Sonora, only a short distance south of our border, is additional evidence that it does not migrate.

Geographic Distribution.—In its faunal relations the LeConte Thrasher belongs to the arid Lower Sonoran Zone, as do most of its congeners; but it does not inhabit the whole of this zone, being restricted to the part that extends westward from central Arizona to the east base of the Great Divide in California. It overlaps the Divide at two points, Walker Pass, where I found it on the west slope about four miles below the summit; and the upper San Joaquin Valley, where Mr. Nelson found it on the south side of Buena Vista Lake and thence west and northwest for 15 or 18 miles toward the Templo Mountains. The latter is an isolated colony. Mr. F. Stephens has traced it southward along the western edge of the Colorado desert, and has also found it near Cape Lobos, Sonora, about 125 miles south of the Arizona border—the only record for Mexico. On the east, Dr. E. A. Mearns has